CARLETON UNIVERSITY

SCHOOL OF COMPUTER SCIENCE

COMP4905 – HONOURS PROJECT

Formation Flight of UAVs Swarms in an Obstacle–Filled Three–Dimensional Environment

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Abstract

Abstract goes here!

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This project uses Webots (http://www.cyberbotics.com), an open-source mobile robot simulation software developed by Cyberbotics Ltd.

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1 Introduction

There are many situation where cooperation between members of a group is necessary in order to solve a specific problem. For example, we might wish to move a heavy object that require its weight to be balanced, or we have a large surface area that we wish to explore. These problems can be acheived using a swarm of robotic systems. Multi-robot or swarm robotic systems consist of a large number of small and simple autonomous robots, each having limited communication/sensing capability and computational resources (Hyondong Oh 2017).

Bibliography

Hyondong Oh, et al. (2017). "Bio-inspired self-organising multi-robot pattern formation: A review". In: *Robotics And Autonomous Systems* 91.